

A pancreatic controller (102), comprising: a glucose sensor (118), for sensing a level of glucose or insulin in a body serum; at least one electrode (110, 112), for electrifying an insulin producing cell or group of cells; a power source (104) for electrifying said electrode with a pulse that does not initiate an action potential in said cell and has an effect of increasing insulin secretion; and a controller (106) which receives the sensed level and controls said power source to electrify said electrode to have a desired effect on said level.